



A.D. 1855 N° 1020.

S P E C I F I C A T I O N

OF

JOHN HENRY JOHNSON.

FURNACES, &c.

LONDON:

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25, SOUTHAMPTON BUILDINGS, HOLBORN.

1855.



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Furnaces, &c.

(This Invention received Provisional Protection, but notice to proceed with the application for Letters Patent was not given within the time prescribed by the Act.)

PROVISIONAL SPECIFICATION left by John Henry Johnson at the Office of the Commissioners of Patents, with his Petition, on the 7th May 1855.—A communication.

I, JOHN HENRY JOHNSON, of 47, Lincoln's Inn Fields, in the County of
5 Middlesex, and of Glasgow, North Britain, Gentleman, do hereby declare the nature of the said Invention for "**IMPROVEMENTS IN THE CONSUMPTION OR PREVENTION OF SMOKE**," a communication from Etienne Bourgeois, of Rheims, in the Empire of France, Card Manufacturer, to be as follows:—

This Invention relates to a peculiar construction and arrangement of
10 furnace or fire-place, whereby the entire combustion of the smoke and unconsumed gases thrown off from the green fuel is effectually accomplished, whilst the heat and flame produced by such combustion assists materially in the heating of the boiler or other apparatus, and consequently effects a considerable economy in fuel. The improvements consist in placing an auxiliary grate
15 immediately behind the bridge of the furnace, which is fed separately by a lateral door with coke, & is in direct communication from below with the main furnace, the products of combustion from which must pass through the incandescent fuel by entering from the under side of and passing through the auxiliary grate before entering the flue. This latter grate may be composed

Johnson's Improvements in the Consumption or Prevention of Smoke.

either of fire brick or of a cast-iron chamber or cavity, having bars arranged across the bottom. In order to prevent the admission of cold air into the auxiliary fire-place or furnace while stoking, a sliding box without either bottom or top is employed, such box fitting accurately into the passage leading to the grate. When this box draws out it rests on the fire door, which opens 5
downwards to a horizontal position, & is then filled with coke and pushed forward along the passage, the coke falling out at the bottom on arriving over the fire-place. A suitable ash-pit is formed below the auxiliary furnace, and a closing aperture is formed in the side for the facility of raking the fire bars.

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